2/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135361

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OPTIMUM CONDITIONS FOR CONDENSING ALKYLPHENOLS WITH CH SUB2 O (RATIO 1:0:25) WERE IN THE PRESENCE OF 0.5 PARTS HG SUB2 CCO SUB2 H AT 98DEGREES. CONDENSATION IN THE PRESENCE OF HCL WAS MORE EFFECTIVE BUT THE CORROSION RATE WAS 10 TIMES THAT WITH HG SUB2 CCO SUB2 H. THE PRODUCTS OF THE 2 METHODS WERE SIMILAR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--CONDENSATION OF ALKYLPHENOLS WITH FORMALDEHYDE IN THE PRESENCE OF OXALIC ACID DURING THE PREPARATION OF A BENZOFURANCARBOXYLIC ACID

AUTHOR-(04)-ALLAKHVERDIYEV, G.A., RZAYEV, R.G., NAMAZOV, I.I., GASANOV, D.G.

COUNTRY OF INFO--USSR

SOURCE--AZERB. NEFT. KHOZ. 1970, (3), 34-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--CONDENSATION REACTION, PHENOL, FORMALDEHYDE, OXALIC ACID, FURAN, AROMATIC CARBOXYLIC ACID, CORROSION RATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1796 STEP NO--UR/0448/70/000/003/0034/0035

CIRC ACCESSION NO--AP0135261

UNCLASSIFIED

USSR

UDC 599.323.4:(575.123)

ALLABERGENOV, K., Institute of Zoology and Parasitology, Academy of Sciences, Uzbek SSR

"Settlement of Muskrats in Fergana Valley"

Tashkent, Uzbekskiy Biologicheskiy Zhurnal, No 4, 1971, pp 77-78

Abstract: Some 345 muskrats were introduced into lakes of Khoresm, Tashkent, and Syr-Dar'ya oblasts in Uzbekistan in 1953 and within two years their numbers reached commercial proportions. In 1957 more than a million pelts were obtained. The animals migrated up the Syr-Dar'ya river and reached bodies of water in the western part of Fergana valley. They now inhabit small streams, rivers, lakes, and discharge canals. In Fergana valley, the muskrats prefer to settle in beds of reeds and other plants whose lower shoots serve as food, while the thickets themselves are used for protection and nests. The population has grown so large as to constitute a threat to irrigation works and extermination measures are needed in some places.

1/1

USSR

ALLABERDYYEV, D., Izvestiya Akademii Nauk Turkmenskoy SSR--Seriya Fiziko-tekhnicheskikh, Khimicheskikh i Geologicheskikh Nauk, No 2, 1973, pp 12-19

and curves for the skip distance as a function of the radiation angle in the two-layered and three-layered ionosphere are plotted.

2/2

USSR

UDC 621.391.826

ALLABERDYYEV, D.

"Shortwave Skip Distance for Various Ionosphere Models"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR--Seriya Fiziko-tekhnicheskikh, Khimicheskikh, i Geologicheskikh Nauk, No 2, 1973, pp 12-18

Abstract: The description is given of computations of the skip distance of signals in the shortwave band made for the specified ionosphere parameter of $\varphi_0 = 90\text{-}60^0$, in accordance with a method given in an earlier publication (Ya. L. Al'pert, Rasprostraneniye radiovoln i ionosfera -- Propagation of Radio Waves in the Ionosphere -- Moscow, AN SSSR, 1960). An examination was made of 24 models of the ionosphere in the middle latitudes of the northern hemisphere, their parameters being taken from the data of earlier papers; 12 of these models corresponded to the single-layered midnight ionosphere, and 8 to the two-layered ionosphere during the winter and equinoctial seasons; the others corresponded to the three-layer ionosphere, during the summer at noon. Each model was separately considered for low-activity and high-activity years. The mathematical model for the two-layered spherical ionosphere is described,

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2/2 016 UNCLASSIFIED PROCESSING DATE--[illegible]170

CIRC ACCESSION NO--AP0125951

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STAINLESS STEEL [illegible] OF PARTICLE SIZE 40-45 MU WAS USED AS A SUPPORT FOR GAS-LIQ. CHROMATOG. THE COLUMNS WERE PACKED WITH DRY POWDER, AND A LIQ. PHASE (HEXADECANE) WAS APPLIED BY PASSING ITS SOLN. IN CCL SUB4 (1:5) THROUGH THE COLUMN UNDER VACUUM (WATER PUMP). THE PERMEABILITY OF THE POWDER FOR CARRIER GAS WAS PROPORTIONAL TO SQUARE OF THE DIAM. OF THE PARTICLE. APPLICATION OF SMALL SIZE PARTICLES WITH GOOD GAS FLOW ALLOWED A DECREASE OF THE HETP (HEIGHT EV. TO A THEORETICAL PLATE) DOWN TO 1 MM. AN INCREASE OF COLUMN DIAM. DID NOT DECREASE ITS EFFECTIVENESS, I.E. SUCH COLUMNS WERE PARTICULARLY USEFUL FOR PREPARATIVE WORK. USE OF H AS CARRIER GAS GAVE BETTER SEPN. THAN N. THE RELATIONS BETWEEN HETP AND GAS FLOW ACCORDING TO PARTICLE SIZE AND COLUMN DIAM. ARE GIVEN. FACILITY: VSES. NAUCH.-ISSLED. GEOLOGORAZVED. NEFT. INST., MOSCOW, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--USE OF FINELY DIVIDED METAL POWDERS AS SUPPORTS IN GAS CHROMATOGRAPHY -U-

AUTHOR-(05)-YANOVSKIY, S.M., ALKSNIS, O., LIBERMAN, I.I., SAZONOV, M.L., ZHUKHOVITSKIY, A.A.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(2), 136-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GAS CHROMATOGRAPHY, STAINLESS STEEL, PARTICLE SIZE, CHEMICAL LABORATORY APPARATUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0135 STEP NO--UR/0032/70/036/002/0136/0138

CIRC ACCESSION NO--AP0125951

UNCLASSIFIED

2/2 037 UNCLASSIFIED PROCESSING DATE--23OCT7(

CIRC ACCESSION NO--AP0119599

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE APPEARANCES OF VINIPLAST (I) (THERMALLY PLASTICIZED POLY(VINYL CHLORIDE)), HIGH D. POLYETHYLENE (II), LOW D. II, AND POLY(TETRAFLUOROETHYLENE) (III) SHEETS DRAWN UNDER UNIAXIAL TENSION AT 1 ATM ANDDER HYDROSTATIC PRESSURE (500-1000 KG-CM PRIME2) WERE EXAMD. BY OPTICAL AND ELECTRON MICROSCOPY, AND X RAY SCATTERING AT LARGE AND SMALL ANGLES. SUPERPOSITION OF HYDROSTATIC PRESSURE DURING DRAWING CAUSED A SHARP DECREASE IN OBSD. STRUCTURAL DEFECTS IN DEFORMED SAMPLES. OPTICAL MICROSCOPY DETECTED FISSURES AND OVAL CAVITIES IN THE LONGITUDINAL AND TRANSVERSE DIRECTIONS, RESP., OF UNIAXIALLY DRAWN I. UNIAXIALLY DRAWN SAMPLES OF I AND HIGH D. II WERE OPAQUE, WHEREAS SAMPLES DRAWN UNDER HYDROSTATIC PRESSURE WERE TRANSPARENT. X RAY SCATTERING AT LARGE ANGLES SHOWED LITTLE DIFFERENCE BETWEEN THE TYPES OF DRAWING FOR I, HIGH AND LOW D. II, AND III; BUT UNIAXIALLY DRAWN HIGH D. II AND III SAMPLES SHOWED LG PERIODS AND EQUATORIAL SCATTERING WITH LONG PORES ALONG THE DIRECTION OF TENSION, WHEREAS SAMPLES DRAWN UNDER HYDROSTATIC PRESSURE SHOWED NO EQUATORIAL SCATTERING. FACILITY: INST. MEKH. POHM., RIGA, USSR.

UNCLASSIFIED

1/2 037 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF HYDROSTATIC PRESSURE ON THE STRUCTURES OF POLYMER MATERIALS -U-

AUTHOR--ALKSNE, K.

COUNTRY OF INFO--USSR

SOURCE--LATV. PSR ZINAT. AKAD. VESTIS 1970, (2), 70-5

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HYDROSTATIC PRESSURE, MATERIAL DEFORMATION, POLYVINYL CHLORIDE, POLYETHYLENE, POLYTETRAFLUOROETHYLENE, PLASTIC FABRICATION, MICROSCOPY, X RAY SCATTERING/(U)VINIPLAST POLYVINYL CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0691 STEP NO--UR/0197/70/000/002/0070/0075

CIRC ACCESSION NO--AP0119599

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106881

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHANGES IN THE ORIENTATION OF HIGH D, POLYETHYLENE (I) MACROMOLS. AND THE TRANSFORMATION OCCURRING IN THE PERIODS L SUB1 AND L SUB2 (H. HENDUS, 1959) DURING DRAWING OF I SAMPLES WERE STUDIED BY X RAY DIFFRACTION PHOTOGRAPHY. THE NONORIENTED I SAMPLES AND 2 DIFFRACTIONALLY DIFFERENT SYSTEMS HAVING MUTUALLY PERPENDICULAR PERIODS. SINCE L SUB2 WAS GRADUALLY TRANSFORMED INTO THE USUAL LONG PERIOD LOCATED ON THE MERIDIAN OF THE X RAY FIBER DIAGRAM, THERE WAS NO TOTAL BREAKDOWN OF THE ORIGINAL STRUCTURE OR FORMATION OF A NEW ORIENTED SYSTEM OF FIBRILS DURING DEFORMATION. CONVERSELY, GRADUAL TRANSFORMATION OF L SUB2 SUGGESTED THAT ONLY A PARTIAL BREAKDOWN AND ORIENTATION OF STRUCTURAL ELEMENTS (WHICH ACCOUNTED FOR THE APPEARANCE OF THE PERIOD) HAD OCCURRED. DIFFRACTION EFFECTS (RELATED TO A CHANGE IN L SUB2) INDICATED THAT DRAWING OF NONORIENTED I SAMPLES WAS ACCOMPANIED BY STRAIGHTENING OF SPIRAL FIBRILS.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--TWO LONG PERIODS IN UNORIENTED POLYETHYLENE -U-

AUTHOR--ALKSNE, K., GERASIMOV, V.I., TSVANKIN, D.YA.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(2) 139-42

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYETHYLENE, MACROMOLECULE, X RAY PHOTOGRAPHY, X RAY DIFFRACTION, POLYMER STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0225 STEP NO--UR/0460/70/012/002/0139/0142

CIRC ACCESSION NO--AP0106881

UNCLASSIFIED

USSR UDC: 621.372.061

ALKIN, K. O., DROZDOVA, L. A.

"Reception of Weak Signals in a Two-Channel Asynchronous Storage Circuit With Inertial Detection"

Otbor i peredacha inform. Resp. mezhved. sb. (Selection and Transmission of Information. Republic Interdepartmental Collection), 1970, vyp. 25, pp 47-51 (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2A113)

Translation: The authors analyze the operation of an asynchronous storage circuit in the case of reception of a weak [$(s/n)_{in} < 1$] correlated continuous signal against a background of independent or weakly dependent interferences. An expression is found for the ratio $(s/n)_{out}$ in the case of signal reception against a background of independent or weakly dependent interferences. The results of calculation of $(s/n)_{out}$ by the resultant formulas are given for several values of $(s/n)_{in}$. A diagram and experimental results are given. Bibliography of 10 titles. Resume.

1/1

2/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106851

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR SPECTRA SHOW THAT N SUB2 O, NO, N SUB2, AND H SUB2 O ARE THE MAIN PRODUCTS OF THE CATALYTIC OXIDN. OF NH SUB3 ON A 1:2 BI,MO CATALYST. 70PERCENT OF THE NH SUB3 IS CONVERTED TO N AND THE REMAINING PART IS OXIDIZED TO THE MENTIONED PRODUCTS. THE ACTIVATION ENERGY OF NH SUB3 OXIDN. IS 11 KCAL-MOLE AND THE OXIDN. IS A 1.5 ORDER REACTION WITH RESPECT TO NH SUB3 CONCN.

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--23OCT7C

CIRC ACCESSION NO--AT0119886

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDIES OF THE ACTIVITY OF 13 SN-SB OXIDE CATALYSTS COVERING THE COMPLETE COMPN. RANGE, FOR THE OXIDATIVE DEHYDROGENATION, DEEP SEATED OXIDN., AND ISOMERIZATION OF C SUB4-5 OLEFIN MIXTS. IN PULSE AND FLOW SYSTEMS AT 350-450DEGREES, INDICATE THAT ACTIVITY IS PROPORTIONAL TO SP. SURFACE OF CATALYSTS, AND THAT MAX. ACTIVITY IS NOTED FOR CATALYSTS WITH 4:1 OR 9:1 ATOM RATION SN-SB. LITTLE ACTIVITY IS SHOWN BY SNO SUB2, AND LESS BY SB SUB2 O SUB4. THE CATALYSTS ARE PREPD. BY MIXING NITRATE SOLNS., SEPG. AND DRYING THE PPT., AND CALCINING 16 HR AT 850DEGREES. SP. SURFACE AREAS RANGED FROM 0.9-27.2 M PRIME2 PER G. THE ACTIVE CATALYST IS SN-SB SOMPD., WHICH IS AMORPHOUS TO X RAY EXAMN. FACILITY: AZERB. INST. NEFTI KHIM. IM. AZIZBEKOVA, BAKU, USSR.

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110747

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SURFACE BARRIER SI DETECTOR SYSTEM OF 4 TIMES 10 PRIME NEGATIVE7 SEC RESOLN. WAS CALIBRATED BY THE ALPHA LINE OF PRIME239 PU AND THERMAL N IRRADIATED PRIME235 U TO MEASURE THE FISSION DATA OF PRIME244 CM ELECTRODEPOSITED ON 80 MU G=CM PRIME2 OF AL; SMALLER THAN 1PERCENT OF THE FISSION EVENTS COINCIDED WITH ALPHA EMISSIONS. THE KINETIC ENERGY AVERAGED 188.6 PLUS OR MINUS 1.6 MEV; THAT OF THE LIGHT WT. FISSION PRODUCTS (AV. MOL. WT. 104.6 PLUS OR MINUS 1.0) 107.5 PLUS OR MINUS 1.2 MEV; THAT OF THE HEAVY FISSION PRODUCTS (AV. MOL. WT. 139.0 PLUS OR MINUS 1.4) 81.1 PLUS OR MINUS 1.0 MEV. THE STD. INCLINATIONS WERE 11.5 MEV AND 5.9 AMU. IN ADDN., STABLE MASSES OF 146, 140, 137, 136, AND 134 AMU WERE ASSOCD. WITH 1[illegible]-9, 1[illegible]-3, 196-2[illegible], 202-6, AND 208-16 MEV.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--KINETIC ENERGIES AND MASS DISTRIBUTIONS OF FRAGMENTS OF CURIUM-244 SPONTANEOUS FISSION -U-

AUTHOR-(05)-ALKHAZOV, I.D., KOSTOCHKIN, O.I., KOVALENKO, S.S., MALKIN, L.Z., PETRZHAK, K.A.

COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(3), 501-7

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CURIUM, ENERGY SPECTRUM, PARTICLE DISTRIBUTION, FISSION PRODUCT, SEMICONDUCTOR DETECTOR, COINCIDENCE COUNTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1057 STEP NO--UR/0367/70/011/003/0501/0507

CIRC ACCESSION NO--AP0110747

UNCLASSIFIED

2/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107595

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEMI EMPIRICAL FORMULAS ARE GIVEN FOR CALCN. OF THE TOTAL AND DIFFERENTIAL CROSS SECTIONS OF IONIZATION AND EXCITATION (BY ELECTRONS WITH NONRELATIVISTIC ENERGY) CORRESPONDING TO BOTH THE ALLOWED AND FORBIDDEN TRANSITIONS OF HE ATOMS FROM THE GROUND STATE. THE FORMULAS DESCRIBE THE HE IONIZATION AND EXCITATION CROSS SECTIONS WITH THE ACCURACIES OF SIMILAR TO 5 AND 20-30PERCENT FOR HIGH AND LOW (SMALLER THAN OR EQUAL TO 100 EV) ELECTRON ENERGIES, RESP. THE FORMULAS WERE USED FOR CALCN. OF THE MEAN FORMATION ENERGY OF THE ELECTRON ION PAIR AND THE VALUE OF IONIZATION FLUCTUATIONS OF HE WITH ELECTRONS.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECTIVE CROSS SECTIONS OF THE IONIZATION AND EXCITATION OF HELIUM BY ELECTRON IMPACT -U-

AUTHOR--ALKHAZOV, G.D.

COUNTRY OF INFO--USSR

SOURCE--ZH. TEKH. FIZ. 1970, 40(1), 97-107

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRON BOMBARDMENT, EXCITATION CROSS SECTION, GAS IONIZATION, HELIUM, CALCULATION, ELECTRON ENERGY, ELECTRON TRANSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1086 STEP NO--UR/0057/70/040/001/0097/0107

CIRC ACCESSION NO--AP0107595

UNCLASSIFIED

USSR

UDC: 621.384.630

ABROSIMOV, N. K., ALEKHAGOV, D. G., DMITRIYEV, S. P., YELISEYEV, V. A., KAMINKER, D. M., KULIKOV, A. V., MIRONOV, Yu. I., MIKHEYEV, G. F., RYABOV, G. A., CHERNOV, N. N., SHALMANOV, V. I., KOMAR, Ye. G., MALYSHEV, I. F., MONOSZON, I. A., PEREGUD, V. I., ROZHDESTVENSKIY, B. V., ROYFE, I. M., SEREDENKO, Ye. V., Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences of the USSR, Leningrad, Scientific Research Institute of Electrophysical Equipment imeni D. V. Yefremov, Leningrad

"The Leningrad Synchrocyclotron for a Proton Energy of 1 GeV"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 9, Sep 71, pp 1769-1779

Abstract: The paper describes the synchrocyclotron at the Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences of the USSR for a proton energy of 1 GeV. Proton beam parameters as well as the characteristics of the main systems of the accelerator are presented. The beam channels are described, and the layout of the accelerator building is given. The installation has been in successful operation since 1970. Three tables, two figures, bibliography of twelve titles.

1/1

USSR UDC 536.2.08

AZIZOV, A. M., ALKUAZOV, A. M.

"Closed Solution of Some Heat Conductivity Problems for the Simplest Thermal Transducers"

Tr. metrol in-tov SSSR (Works of the Institutes of Metrology USSR), 1969, vyp. 105(165), pp 185-190 (from RZH-Metrologiya i Izmeritel'naya Tekhnika, No 1, Jan 70, Abstract 1.32.624)

Translation: The closed solutions of the heat conductivity equation for thermal transducers in the form of "infinite" cylinders, plates or spheres under the boundary conditions of the third kind are presented. One possible application of the obtained solutions for expressing sums of some series in the closed form is shown. The solution for the flat thermal transducers is applied in determining the time "constant" of a single-capitance link which simulates the thermal transducer.

1/1

2/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0053285

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CORROSION INHIBITING ACTIVITIES OF THE TITLE COMPDS., RST(DET) SUB3 (I), WHERE R EQUALS H SUB2 N(CH SUB2) SUB3 PRIME NEGATIVE, ET SUB2 N(CH SUB2) SUB3 PRIME NEGATIVE, ET SUB2 NCH SUB2 PRIME NEGATIVE, PHNHCH SUB2 PRIME NEGATIVE, H SUB2 N(CH SUB2) SUB6 NHCH SUB2 PRIME NEGATIVE, H SUB2 N(C SUB2 H SUB4 NH) SUB2 (CH SUB2) SUB3 PRIME NEGATIVE, AND H SUB2 N(C SUB2 H SUB4 NH) SUB2 CH SUB2 PRIME NEGATIVE, WERE DETD. (THE RESULTS ARE GIVEN IN TABULAR FORM AS PERCENT PROTECTIVE ACTION) AT VARIOUS TEMPS. AND CONCNS. OF I. I CONTG. POLYAMINE GROUPS WERE MOST EFFECTIVE.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--ORGANOSILICON AMINES USED AS CORROSION INHIBITORS -U-

AUTHOR-(05)-SHREYBER, G.K., SAAKIYAN, L.S., LOSEV, V.B., ALKHAMEDAN, KH., SKRIPCHENKO, V.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(1) 200-2

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CORROSION INHIBITOR, ORGANOSILICON COMPOUND, AMINE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/0300 STEP NO--UR/0080/70/043/001/0200/0201

CIRC ACCESSION NO--AP0053285

UNCLASSIFIED

USSR UDC 661.2:621.382.3.004.12

D'YAKONOV, V. P., ALI-ZADYE, D. G.

"Cathode-Ray Curve Tracer for Observing the Volt-Ampere Characteristics of Avalanche Transistors"

Voronezh, Izmeritel'naya Tekhnika, No 4, 1971, pp 57-59

Abstract: A detailed study is made of the volt-ampere characteristics of avalanche transistors, and the schematic of a cathode-ray curve tracer for controlling them is described. The possibility of using the tracer not only for qualitative but also for quantitative estimates is demonstrated, and experimental data are presented.

The operation of the tracer, possible causes of error, means of eliminating them and calibration procedures are described. The error in measuring the volt-ampere characteristics was entirely determined by the error in the oscillograph which does not exceed ±10 percent on calibrating the amplifiers.

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USSR

UDC 621.[illegible]

KULIYEV, A. M., ALIZADE, Z. A. and VELIYEVA, R. K.

"Preparing Phosphorus-, Sulfur-, and Chlorine-Containing Additives from Thioesters of Alpha-Monochlorohydrin Glycerin"

V sb. Prisadki k smazochn. maslam (Additives to Lubricating Oils--collection of works), No 2, Baku, Azerbaydzhan SSR Academy of Sciences, 1969, pp 57-62 (from RZh-Khimiya, No 1(II), 10 Jan 70, Abstract No 1 P 257)

Translation: Thioesters of glycerine alpha-monochlorohydrin with the general formula $RSCH_2CH(CH_2Cl)OH$ (I) (R = n-alkyl C_4 - C_{12}) were prepared by the condensation of equimolar amounts of thioalcohols and epichlorohydrin at 90-120° for 10-15 hours. Additives with the formula $[RSCH_2CH(CH_2Cl)O]_2P$ were prepared by the reaction of I and PCl_3. Additives with the formula $[RSCH_2CH(CH_2Cl)O]_3PS$ (III) were prepared by the reaction of II and S. Tests using a four-ball friction machine showed that II and III in a petroleum oil solution (3-5%) have good antiseizure properties.

A. M. Kuvikovich

1/1

USSR UDC: [illegible]

SULEIMANOVA, P. G., ZAYLADOV, I. K., MEYOVICH, I. I., [illegible], and VELIYEVA, K. K.

"Selection of Oils and Additives to Oils Used for Lubrication of [illegible]"

Trudy AN Azerb. SSR. Baku (Lubricating Oil Additives -- [illegible]),

No. 2, pp [illegible], Baku, Academy of Sciences Azerb SSR, [illegible] Zhurnal--Khimiya, No 2, 1970, Abstract No 2 P279, from the [illegible])

Translation: The influence of various additives to oils used for [illegible] of rotors and swivels used in the drilling of oil and gas wells is investigated. The additives A-3 and ZhNIP-53 have the greatest effectiveness. Tests are presented under commercial conditions of the most effective additive A-3, and positive results are produced.

1/1

UDC 678.742.3.01:53

USSR

MAMEDOV, R. I., SADYKH-ZADE, S. I., SULTANOV, R. A., ALIYEV, G. D.
ALI-ZADE, E. M., and FATALIYEV, A. G.

"Modification of Polypropylene With Organsphosphorus Compounds During the Reprocessing"

Moscow, Plasticheskiye Massy, No 6, 1973, pp 61-62

Abstract: Results of the investigation of thermal and optical aging of a polypropylene sample modified by a diphosphite are described. It was established that addition of the diphosphite to the polypropylene retards the oxidation processes, this material exhibiting better indexes than polypropylene samples modified with synergistic mixtures of 0.3% of topanol KA + 0.5% of dilauryl thiodipropionate and the light stabilizer benzone OA. Addition of the diphosphite to the polypropylene increases considerably its elasticity preserving its starting strength and increasing its frost stability down to -30°C.

1/1

USSR

UDC: 621.373.5

D'YAKONOV, V. P. and ALI-ZADE, D. G.

"Relaxation Oscillator Using an Avalanche Transistor With Quartz Autosynchronization"

Moscow, Pribory i Tekhnika Eksperimenta, No. 3, 1971, pp 108-110

Abstract: Since ordinary oscillators suffer from low frequency instability due to variations in supply voltage, temperature, and transistor parameters, the oscillator described in the present article incorporates the feature of autosynchronization. This is supplied by the inclusion of a quartz crystal in the relaxation oscillator circuit. The circuit of the oscillator, as indicated by the schematic given, is quite simple. The amplitude of the pulses at the circuit output is about three volts with a rise time of less than 50 μs. At a quartz crystal frequency of 100 kHz and at the fundamental oscillatory frequency, the frequency stability is $2 \cdot 10^{-7}$ with a change of ±10% in the supply voltage. The efficiency of the oscillator was checked with crystal frequencies of 50 kHz to 5 MHz. The authors are connected with the Smolensk branch of the Moscow Power Institute.

1/1

USSR

UDC 621.373

D'YAKONOV, V. P., ALI-ZADE, D. G.

"Power Pulse Oscillators Using Avalanche Transistors"

Moscow, Pribory i tekhnika eksperimenta, No 4, July-August, [illegible], pp 125-128

Abstract: Oscillators of this type are used principally in experimental nuclear physics as well as various branches of electronics, for excitation of laser diodes, quick recovery diodes, and the like. The advantages of these oscillators is their simplicity, high pulse amplitude, minimum pulse rise time, and good temperature stability. The purpose of this paper is to provide information concerning the operation of domestic transistors in the avalanche mode and to demonstrate the ability of such transistors to produce power pulses. A schematic of the oscillator, using two or more parallel-connected relaxation oscillators for high pulse amplitude, is shown. Also given is a table of transistor types and their parameters, which shows that one of the best of these devices is the planar epitaxial transistor, which forms pulses of up to 100 volts with a 1-nanosecond rise time for a 75-ohm load resistor. Oscillograms of the circuit's output pulses are shown. The authors conclude that pulse amplitudes of 200 volts and better can be obtained with the development of special transistors operating in the avalanche mode.

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2/2 030 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0133349

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CALCN. OF THE COEFF. OF THERMAL COND. OF GASES IS USUALLY BASED ON THE NO. OF COLLISIONS OBTAINED BY USING THEORETICAL MODELS AND BY ASSUMING VARIOUS TYPES OF INTERNAL MOVEMENT OF THE MOLS. FOR N AND O, AT 273-333DEGREESK, EXPTL. DATA ARE AVAILABLE ABOUT THE ABSORPTION OF SOUND IN THE ULTRASONIC REGION. CALCNS. BASED ON THESE DATA LED TO THE CONFIRMATION OF THE THEORETICAL EQUATION FOR CALCG. THE COEFF. OF THERMAL COND.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--CALCULATION OF THE THERMAL CONDUCTIVITY OF MOLECULAR GASES ACCORDING TO ULTRAACOUSTIC MEASUREMENT DATA -U-

AUTHOR--ALIYEVSKIY, M.YA.

COUNTRY OF INFO--USSR

SOURCE--TEPLOFIZ. VYS. TEMP. 1970, 8(2), 292-5

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--THERMAL CONDUCTIVITY, GAS, MEASUREMENT, MODEL, NITROGEN, OXYGEN, ACOUSTIC EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1397 STEP NO--UR/0294/70/008/002/0292/0295

CIRC ACCESSION NO--AP0133349

UNCLASSIFIED

USSR

[illegible], A. P., et al., [illegible],
No 6, 1972, [illegible]

Based on the cell cross-section [illegible]
R as a function of the accustical [illegible]
current density, [illegible] and [illegible]
computer was used in the calculations. [illegible]
aluminum-wire solenoid [illegible]
rack, 4 cm wide, w = 3.5, [illegible]
helium at a temperature [illegible]
authors obtained [illegible]
unstable [illegible]
ole [illegible]
the cell [illegible]
on a [illegible]
the resistance [illegible]
this procedure [illegible]

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- 15 -

USSR UDC [621.3.0[illegible]

[illegible], A. [illegible], AL[illegible], [illegible], [illegible]
ALABIN, G. [illegible]

"Electrical Losses and Resistance of Cryogenic [illegible] Magnetoresistance Effect"

Moscow, Izvestiya Akad[illegible] SSSR, [illegible]
pp 72-77

Abstract: [illegible] magnetic-field [illegible] pure metals at cryogenic temperatures [illegible] and physics [illegible] conductors for use in [illegible] lines. [illegible] electrical [illegible] resistance [illegible] resistance [illegible] field [illegible] coefficients [illegible] operating temperature, [illegible]
1/2

USSR

ALIYEVSKAYA, L. V., et al., Sb. tr. In-t gidrodinam. Sib. otd. AN SSSR, 1971, vyp. 4, pp 149-164

with the internal structure of the subbranches and, primarily, the nature of the basic equipment. If the basic equipment of the enterprises is sufficiently specialized with respect to the subbranch, then the integral (variant) model is most adequate. For the polymer machine building subbranch, a partially integral model is constructed; in this way the nonlinear nature of the dependence of the specific capital investments on the production volumes is approximately taken into account. For the petroleum equipment production subbranch the model of linear programming is constructed which takes into account the conditions of mutual interchangeability of the types of equipment. The model is given in the continuous statement also for the subbranch of paper and cellulose machine building -- various conditions of the introduction and mastery of facilities during different periods are considered here.

UDC 51

USSR

ALIYEVSKAYA, L. V., POPOVA, G. S., SHCHAPIRO, A. D.

"Mathematical-Economic Models of the Development of the Subbranches of Petroleum and Chemical Machine Building"

Sb. tr. In-t gidrodinam. Sib. otd. AN SSSR (Collected Works of the Hydrodynamics Institute of the Siberian Department of the USSR Academy of Sciences), 1971, vyp. 4, pp 149-164 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V540)

Translation: On the basis of the existing control system, many branches of the national economy are combining so many different subbranches that it is impossible to construct a united sufficiently conceivable mathematical-economic model adequately describing all the subbranches. In this paper an effort has been made to construct models of the distribution of capital investments for the future in the petroleum and chemical machine building branch with satisfaction of the given requirements for the branch production by years. Inasmuch as in the given case the capital investments are not restrictions but must be defined, the possibility arises for consideration of each subbranch individually. For each of the investigated subbranches the problem of optimizing the capital investments is formulated in the following way: it is necessary to find the optimal capital investments (by the criterion of minimum reduced expenditures) under the condition of complete satisfaction of the demand for the production of each type for the given subbranch for all years of the planned period. The models for the formalization of the problems are selected beginning

USSR

ANTONYUZHENKO, V. A., et al., Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, 1972, pp 19-22

demonstrates inadequacy of central vestibular divisions and suggests involvement of brain stem nuclei. Disturbances of the remaining analysors primarily involve inadequacies in their cortical segments. Instability of central nervous mechanisms evidenced in visual analysors is probably intensified by oculomotor disturbances. Reticular formation dysfunction is implicated in the functional-dynamic nature of visual, auditory, gustatory, and olfactory disturbances.

2/2

USSR UDC 615.9-057:612.84/.88

ANTONYUZHENKO, V. A., GOLOVA, I. A., and ALIYEVA, N. K., Institute of Labor Hygiene and Occupational Diseases, Gor'kiy

"The Condition of Analysor Functions in Chronic Occupational Intoxication by Some Narcotic Chemicals"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, 1972, pp 19-23

Abstract: Gustatory, olfactory, vestibular, auditory, and visual analysor functions of 60 patients with pronounced (stage II and III) occupational intoxication with unsaturated and chlorinated hydrocarbons and methyl methacrylate were tested. The vestibular analysor displayed the clinically most distinctive shifts: Misses in the finger-to-nose test and instability in the Romberg stance were recorded. Half the patients had no vestibulomotor response to thermal nystagmus tests, while 1/3 had severe autonomic reactions. Optokinetic nystagmus tests indicated rapid exhaustion. Visual functions were worsened primarily due to abnormal oculomotor function. Though complaints of poor vision were infrequent, studies of optic chronaxie, dark adaptation, and flash discrimination threshold indicated changes in most patients. Complaints of problems with other analysors were absent, but tests indicated diminished hearing ability, heightened taste thresholds for bitter and sweet, and poorer olfactory sensitivity. With respect to vestibular disturbances, the data

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USSR

ALIYEV, N. G., et al., Teplofiz. svoystva veshchestv pri nizk. temperaturakh -- sb., 1972, pp 163-167

accuracy was 0.5 percent with respect to the calibration data. The dilatometer's sensitivity was found to be $1 \cdot 10^{-9}$. This measurement method makes it possible to eliminate the introduction of a correction factor for the expansion of quartz. (3 illustrations; 13 bibliog. ref.)

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UDC 536.413:620.181.428.4.05.082

USSR

ALIYEV, N. G., KERIMOV, I. G., KURBANOV, M. M., and MAMEDOV, T. A.

"A Dilatometer With Photoelectric Registration"

Moscow, Teplofiz. svoystva veshchestv pri nizk. temperaturakh -- sb. (Thermophysical Properties of Substances at Low Temperatures -- Collection of Works), 1972, pp 163-167 (from Referativnyy Zhurnal -- Metrologiya i Izmeritel'naya Tekhnika, No 2, 1973, Abstract No 2.32.962 by V. S. K.)

Translation: The authors describe the design of a highly sensitive dilatometer with photoelectric registration that is used to measure the thermal expansion of solids in the 4.2-400 K range, in addition to explaining the measurement procedure. The dilatometer includes a system for registering and transmitting the amount of elongation. The main part of the elongation registration system is a differential photoresistor that is part of a bridge network. A coiled constantan wire is used to heat the sample throughout its entire length. Its temperature is measured with an angular resistance thermometer in the 4.2-100 K range, and with a copper-constantan thermocouple in the 100-400 K range. The instrument is calibrated over the 4.2-400 K range by using a piece of copper 50 mm long and 5 mm in diameter as a standard. The instrument was checked by measuring the thermal expansion of aluminum; this showed that the measurement

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USSR

ABASOV, S. A., et al, Baku, Doklady Akademii Nauk Azerbaydzhanskoy SSR, Vol [illegible], No 8, 1972, pp 11-16

to be U_0 = 23 kcal/mol. Academician G. G. ABDULLAYEV assisted the authors in this work. 5 figures, 1 table, 11 bibliographic references.

2/2

.USSR

UDC 539.4.001.2

ABASOV, S. A., ALIYEVA, M. KH., and ELMIRA, CHALAL GYZY

"Strength Properties of a TlSe Single Crystal and the Effect of Different Factors on It"

Baku, Doklady Akademii Nauk Azerbaydzhan SSR, Vol 28, No 8, 1972, pp [illegible]

Abstract: The results of investigating the time and temperature relationship for the strength of a thallium selenide single crystal and the effect of heat treatment, crystal anisotropy, and various impurities on these relationships are presented. It was found that the thallium atoms in TlSe exist in two completely different crystallographic positions in which half the atoms are monovalent and the remainder trivalent. During heat treatment (5[illegible]°K for and 25 hours) favorable conditions are created for dissipation of thermal stresses, the atoms occupy their normal positions, and the crystal is more complete. During this same period the concentration of carriers decreases from 10^{17} to 10^{15} cm^3, resulting in increased crystal strength. However, when the heat-treated TlSe single crystal is quenched after heat treatment, unstable acceptor centers are formed, associated with intrinsic lattice defects, which leads to an unstationary state and [illegible]. The activation energy for the process of mechanical failure of TlSe was found

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AP0100370

bonding. The following data were obtained (R, R^1, R^2, position attachment of pyridine ring, and planar angle between two rings given): Me, H, Me, 2, 58°; Me, H, Me, 3, 81°; Me, H, Me, 4, 0°; Pr, Et, NH_2, 3, 66°; $PhCH_2$, Ph, NH_2, 3, 56°; *p*-MeC_6H_4, H, NH_2, 3, 80°; Et, Me, NH_2, 4, 0°; Me, H, Cl, 1, 0°; Me, H, NH_2, 2, 0°; $PhCH_2$, Ph, NH_2, 2, 0°; Et, Me, NH_2, 2, 0°; Pr, Et, NH_2, 2, 0°; *p*-$H_2NC_6H_4$, H, NH_2, 2, 0°.

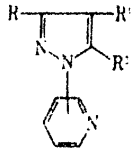
S. K. Banerjee

19841796

ALIYEVA S.A.

Acc. Nr: AP0100870 Abstracting Service: CHEMICAL ABST. Ref. Code: 5/70 UR 0409

110632b **Nitrogen-containing biheterocyclic systems. I. Dipole moments and structure of 1-pyridylpyrazoles.** Alieva, S. A.; Kolodyazhnyi, Yu. V.; Garnovskii, A. D.; Osipov, O. A.; Grandberg, I. I.; Krokhina, N. F. (Rostov.-na-Donu Gos. Univ., Rostov-on-Don, USSR). *Khim. Geterotsikl. Soedin.* 1970, (1), 45–9 (Russ). The dipole moments of 1-pyridylpyrazoles and their amino derivs. were detd. in C_6H_6 at 25° with 5×10^{-3}–2×10^{-4} mole fraction. Comparison of exptl.



and vectorially calcd. dipole moments shows that 1-pyridylpyrazoles, and 1-(3- or 4-pyridyl)5-aminopyrazoles have nonplanar configuration; the planar angle between the pyrazole and pyridine rings was calcd. For 1-(2-pyridyl)-5-aminopyrazole the planar trans configuration is assumed due to intramol. H

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REEL/FRAME 19841795

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USSR

UDC 547.551.4 + 541.49

GARNOVSKIY, A. D. KOLODYAZHNYY, YU. V., ALIYEVA, S. A., KROKHINA, N. F., GRANDBERG, I. I., OSIPOV, O. A., and PRESNYAKOVA, T. M., Rostov-on-Don State University and All-Union Agricultural Academy imeni K. A. Timiryazev

"Complex Compounds of Metals With Nitrogen-Containing Ligands. XIX. Complexes of Tin Tetrachloride With 1-Pyridylpyrazoles and Their 5-Hydroxy(amino) Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 5, May 70, pp 1111-1120

Abstract: Continuing their study of complexing in systems with several donor centers, the authors studied the interaction of tin tetrachloride with 1-(α, β or γ-pyridyl)pyrazoles and their 5-hydroxy and amino derivatives. The dipole moments of the resultant complexes were determined and their IR spectra studied for purposes of solving the question of the configuration and tautomerism of the ligands. A comparative study was made of the IR spectra of ligand and complex molecules in order to establish the localization site of the coordination bond.

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2/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140304

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT.

5,HYDROXY,1,(BENZAZOL,2,YL)PYRAZOLES (I) WERE PREPD. BY REFLUXING A MIXT. OF 0.05 MOLE APPROPRIATE HYDRAZINE AND 0.05 MOLE RCOCHR PRIME1 CO SUB2 R PRIME2 OR PHCH SUB2 C(:NH)CHPHCN (II) IN 50 ML TERT BUOH, 5 ML H SUB2 O, AND 5 ML ACOH 12 HR. THUS PREPD. WERE THE FOLLOWING I (R, R PRIME1, R PRIME2, Y, PERCENT YIELD, AND M.P. GIVEN): PH, H, OH, S, 73, 201DEGREES; PH, CH SUB2 PH, OH, S, 76, 165DEGREES; CH SUB2 PH, PH, OH, NH, 63, 224DEGREES; AND CH SUB2 PH, PH, OH, NCH SUB2 PH,-,-. REFLUXING EQUIMOLAR AMTS. 2,HYDRAZINOBENZOTHIAZOLE, II, AND 30PERCENT HCL IN ISO PROH GAVE 60PERCENT

5,AMINO,4,PHENYL,3,BENZYL,1,(BENZTHIAZOL,2,YL)PYRAZOLE (I) (R EQUALS CH SUB2 PH, R PRIME1 EQUALS PH, R PRIME2 EQUALS NH SUB2, Y EQUALS S), M. 163DEGREES. DIPOLE MOMENT AND IR STUDIES SHOW THAT I EXIST BOTH INT HE CRYST. FORM AND IN SOLN. MAINLY IN HYDROXY AND AMINO FORMS, WHICH ARE STABILIZED BY INTRAMOL. H BONDING. FACILITY: ROSTOV.-NA-DONU GOS. UNIV., ROSTOV-ON-DON, USSR.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--NITROGEN CONTAINING BIS HETEROCYCLIC SYSTEMS. IV. SYNTHESIS AND STRUCTURE OF 5,HYDROXY,AMINO,1,BENZAZOLYLPYRAZOLES -U-

AUTHOR-(05)-GARNOVSKIY, A.D., KOLODYAZHNYY, YU.V., GRANDBERG, I.I., ALIYEVA, S.A., KROKHINA, N.F.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (5), 660-3

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HETEROCYCLIC OXYGEN COMPOUND, PYRAZOLE, THIAZOLE, DIPOLE MOMENT, ORGANIC SYNTHESIS, MOLECULAR STRUCTURE, HYDRAZINE ORGANIC COMPOUND, HYDROXYL RADICAL, AMINE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/E02 STEP NO--UR/0409/70/000/005/0660/0663

CIRC ACCESSION NO--AP0140304

UNCLASSIFIED

Fuzaila, S. V.	tissue culture	1[illegible](42)
Markovich, D. S.	lactate dehydrogenase	19[illegible](43)
Novikova, I. F.	radiation effect	[illegible]
Peshkova, L. V.	phosphorylation	19[illegible](46)
Pronevich, L. A.	antibiotic	19[illegible](47)
Rodionova, M. A.	mitochondrion	19[illegible](51)
Shchipakin, V. N.	phosphorylation	19[illegible](44)
Shubeyev, Ye. M.	radiation/vibration	19[illegible](52)
Sokolova, L. [illegible]	radiation effect	19[illegible](53)
Tsvetkov, V. D.	blood plasma	1[illegible](49)
Umrikhina, N. V.	lactate dehydrogenase	19[illegible](48)
Vilenchik, M. M.	radiation effect	19[illegible](50)
Zamyatnin, A. A.	muscle physiology	19[illegible](45)

Dubrov and Koshcheva[41] are associated with the Laboratory of Cell Biophysics at the Institute. Reference 52 above is of special interest since it presents an investigation of combined stresses, i.e., radiation and vibration. In addition to the above articles, five of the twenty-five[54-58] were authored by persons already identified with the Institute of Biophysics, Pushchino. Reference 55 associates the authors of the article, L. V. Slozhenikina, V. L. Migushina, and A. M. Kuzin, with the Department of Radiobiology at the Institute.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R002065900011-6

ALIYEVA, S A.

USSR UDC 632.95

KULIYEV, A. M., GASANZADE, G. R., RASULOVA, M. A., ALIYEVA, R. G., and RASULOVA, F. A., Institute of Additive Chemistry of the Academy of Sciences Azerbaydzhan SSR

"Method of Producing Alkoxymethyl Esters of Dialkyldithiocarbamic Acids" USSR Authors' Certificate No 316687, Cl. C 07 c 135/04, filed 17 Dec 69, published 23 Dec 71 (from RZh-Khimiya, No 14, 25 Jul 72, Abstract No 14N470 by T. A. Belyayeva)

Translation: Carbamic acid derivatives of the formula $ROCH_2SSCNEt_2$ (I) (R = alkyl or benzyl) which can be employed as pesticides are obtained by the reaction of alkali-metal salts of dialkyldithiocarbamic acids with the alpha-chloroether of aliphatic and aromatic alcohols in an organic solvent at 70-80°. One mole of alpha-chloroisobutyl ether is added to 1 mole of $Et_2NCSSNa$ in C_6H_6 at 70-80°, held for 5-8 hours, washed with water and dried; I is isolated by distillation (R = iso-Bu), yield 90-95%, boiling point 122-6°/1, d_4^{20} 1.0393, $n^{20}D$ 1.5375. The following I's are similarly produced (cited hereinafter are R, boiling point in °C/mm, d_4^{20}, $n^{20}D$): Bu, 136-7/1, 1.0460, 1.5420, C_5H_{11}, 154-5/3, 1.0321, 1.5368; C_6H_{13}, 153-4/1, 1.0178, 1.5300; C_7H_{15}, 163-4/1, 1.0073, 1.5278, $PhCH_2$, 177-8/0.7, 1.1297, 1.5798

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USSR UDC 616.21-057.9:615.33.012.6

ALIYEVA, N. K., Dzerzhinsk Branch of the Gor'kiy Institute of Labor Hygiene and Occupational Diseases

"Condition of ENT Organs in Workers Engaged in Production of Antibiotics"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, Sep 71, pp 20-23

Abstract: Clinical investigations were performed on 365 workers employed in production of penicillin and streptomycin for 3 to 8 years and complaining of impaired nasal breathing (106 persons), dryness in nose and throat (92), nose bleeding (51), running nose and sneezing (21), impaired smell sensation (19), hoarseness (10), headache (82), impaired hearing (45), noises and ringing in the ears (47), vertigo (49), and itching in the ears (7). The examinations revealed subatrophic processes in 97 persons, including rhinitis, pharyngitis, laryngitis, sinusitis, stomatitis, and gingivitis. In 40 persons this pathology was due to candidiasis, while in the others it represented allergic reactions. Hearing was impaired in 34 persons, with a 40-45 decibel threshold elevation mainly in the upper frequencies. Vestibular function tests revealed inhibition in 30 persons and excitation in six. Impairment of both cochlear and vestibular functions was diagnosed in 24 persons.

Acc. Nr. AP0048295 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code UR0181

ALIYEVA M.

105310r **Transverse $\Delta\rho/\rho$ effect in nickel ferrites.** Svirina, E. P.; Alieva, M. S. (Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR). *Fiz. Tverd. Tela* 1970, 12(2), 593-6 (Russ). A new method is proposed for the description of the $(\Delta\rho/\rho)$ effect (magnetoresistance) as a function of the magnetic field, H, and magnetization, I, with the introduction of spontaneous (C_s) and true magnetization (C_t) coeffs. of the $\Delta\rho/\rho$ effect. With increasing temp., the values of C_s decrease and C_t remain practically independent of temp. In the investigated Ni ferrites, the temp. dependence of carrier mobility is mainly detd. by magnetic scattering. A. Libackyj

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REEL/FRAME
19792017

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2/2 049 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0107226

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INVESTIGATION IS MADE OF THE STATIONARY PHOTOCONDUCTIVITY AND ITS KINETIC, THE THERMALLY STIMULATED CONDUCTIVITY, AND THE MOBILITY OF CURRENT CARRIERS OF TIN DOPED P GASE SINGLE CRYSTALS. IT IS SHOWN EXPERIMENTALLY THAT THE RECOMBINATION IN SUCH CRYSTALS IS CONTROLLED BY TWO TYPES OF RECOMBINATION CENTRES: ONE OF THEM BEING "SLOW" (R), ANOTHER "FAST" (S). THE PRINCIPAL PARAMETERS OF "SLOW" RECOMBINATION CENTRES (R), THERMAL (E PRIMET SUBCR EQUALS 0.58 EV) AND OPTICAL (E PRIMEO SUBCR EQUALS 0.78 EV) ENERGETIC DEPTH FROM C BAND, ELECTRCN (S SUBNR EQUALS 5 TIMES 10 PRIME NEGATIVE14 CM PRIME2) AND HOLE (S SUBPR EQUALS 3 TIMES 10 PRIME NEGATIVE20 CM PRIME2) CAPTURE CROSS SECTICNS, ARE MEASURED. THE CONCENTRATION IS FOUND TO BE EQUAL TO N SUBR EQUALS 3 TIMES 10 PRIME14 CM PRIME NEGATIVE3. IT IS SHOWN THAT THE R CENTRE IS A SINGLE CHARGED DONOR WHICH MAY BE DUE TO SUBSTITUTING GA ATOMS BY SN ATOMS IN THE GASE LATTICE.

UNCLASSIFIED

1/2 049 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ON SENSITIZING RECOMBINATION CENTRES IN GASE SINGLE CRYSTALS -U-

AUTHOR-(04)-ABDULLAYEV, G.B., ALIYEVA, M.KH., BELENKIY, G.L., MAMEDOVA, A.Z.

COUNTRY OF INFO--USSR

A

SOURCE--PHYSICA STATUS SOLIDI, 1970, VOL 37, NR 2, PP 571-576

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--ELECTRON STRUCTURE, CRYSTAL LATTICE STRUCTURE, TIN, METAL COATING, SINGLE CRYSTAL, OPTIC PROPERTY, REACTION KINETICS, GALLIUM SELENIDE, PHOTOCONDUCTIVITY, RECOMBUSTION REACTION, CAPTURE CROSS SECTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0629 STEP NO--GE/0030/70/037/002/0571/0576

CIRC ACCESSION NO--AP0107226

UNCLASSIFIED

USSR

UDC: 621.315.592

ABDULLAYEV, G. B., et al, Fizika i tekhnika poluprovodnikov, vol 6, No 6, 1972, pp 1166-1168

In the case of InSe, it was found that the images on it may be strengthened through the use of physical developers.

2/2

USSR UDC: 621.315.592

ABDULLAYEV, G. B., ALIYEVA, M. Kh., GORYACHEV, D. N., KAZIYEV, F. K., MIRIMSKIY, L. G., and KYVRIN, S. M.

"Obtaining Photographic Images on Fine Films of Gallium and Indium Selenides"

Leningrad, Fizika i tekhnika poluprovodnikov, vol 6, No 6, 1972, pp 1166-1168

Abstract: This paper is a sequel to an earlier article by some of the authors named above (D. N. Goryachev, et al, 4, 1970, p 1530) published in the journal named above, in which the use of thin films of lead selenides and sulphides for retaining photographic images was discussed. In the present brief communication, the possibility of getting photographic images on thin films of gallium and indium selenides, of the lesser studied class of semiconductors of the $A^{III}B^{IV}$ type, is considered. To do this, use is made of the dependence of the oxide reproduction process speed at the semiconductor-electrolyte interface on the illumination the semiconductor is exposed to. For the experiments described in this article, polycrystals of p-type GaSe were used in films 0.6 to 0.8 μ thick as well as n-type InSe in films about one micron thick, deposited on glass substrates by sputtering in a vacuum.
1/2

CIRC ACCESSION NO--AP0107464

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ISOCHORIC SP. HEAT C SUBV OF WATER WAS MEASURED AT THE SP. VOLS. V EQUALS 1.04, 1.33, 10.00, AND 20.20 CM PRIME3-G AND FOR THE CRIT. ISOCHORE V SUBC EQUALS 3.17 CM PRIME3-G AT TEMPS. UP TO THE CRIT. TEMP. THE COURSE OF C SUBV LINES IN THE 2 PHASE AND SINGLE PHASE REGION AND ITS DEPENDENCE ON V SHOWED THAT AT THE CRIT. POINT C SUBV HAS A FINITE VALUE FOR PURE SUBSTANCES. AN EFFECT OF IMPURITIES IN WATER (0.2 WT. PERCENT AIR OR 0.1 WT. PERCENT ETOH) ON C SUBV AND GRAVITIONAL EFFECT AT THE CRIT. POINT WERE DETD. EXPTL.

FACILITY: AZERB. NAUCH.-ISSLED. INST. ENERG. IM. ES'MANA, USSR.

1/2 034 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ISOCHORIC SPECIFIC HEAT -U-

AUTHOR-(02)-KERIMOV, A.M., ALIYEVA, M.K.

COUNTRY OF INFO--USSR

SOURCE--TEPLOFIZ. VYS. TEMP. 1970, 8(1), 59-65

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SPECIFIC HEAT, THERMAL EXPANSION, CRITICAL POINT, WATER, IMPURITY LEVEL, GRAVITATION EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0935 STEP NO--UR/0294/70/008/001/0059/0065

CIRC ACCESSION NO--AP0107464
UNCLASSIFIED

USSR UDC 577.391

GONCHARENKO, YE. N., SUBBOTINA, S. M., and ALIYEVA, L. I., Chair of Biophysics, Moscow State University imeni M. V. Lomonosov

"Mechanisms of Change in Serotonin Content of Irradiated Animal Tissues"

Moscow, Biologichesikye Nauki, No 12, 1970, pp 41-44

Abstract: In irradiated rats (1,000 rad), 5-hydroxytryptophan decarboxylare activity increased in the liver, small intestine, and brain 30 min and 24 hours after exposure and then sharply decreased in all organs. Monoamino-oxidate activity decreased in the gastrointestinal tract and liver of irradiated animals, but remained within normal limits in the brain. The formation of lipid radiotoxins is apparently the cause of impairment of enzymatic activity. By way of conformation, injection of rats with lipid radiotoxins resulted in an increase in both the serotonin content of intestine, liver, and brain tissues and in 5-hydroxytryptophan decarboxylare activity. In the terminal period, the serotonin content decreased sharply as did 5-H activity.

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2/2 031 UNCLASSIFIED PROCESSING DATE 07OCT70

CIRC ACCESSION NO--AP0129394

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHANGES IN ABSORBANCE X A[illegible] FUNCTION OF CONCN. Y WERE MEASURED IN A PHOTOELEC. COLORIMETER NEPHELOMETER WITH AN ERROR OF PLUS OR MINUS 1PERCENT FOR GASOLINES B95-130 AND B100-130 CONTG. 0.0028-0.0112PERCENT RHO,(RHO,HOC SUB6 H SUB4) C SUB6 H SUB4 NH SUB2. THE RESULTING LINEAR PLOTS, Y EQUALS 0.006X AND Y EQUALS 0.005X WITH LINEAR CORRELATION COEFFS. OF 2.2312 AND 2.3543 WERE THE CURVILINEAR DEPENDENCE OF Y ON LIGHT TRANSMISSION.

UNCLASSIFIED

1/2 031 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--DETERMINING THE CONCENTRATION OF ADDITIVES IN THE COMPOSITION OF AVIATION GASOLINES -U-

AUTHOR--ALIYEVA, E.D.

COUNTRY OF INFO--USSR

SOURCE--AZERB. NEFT. KHOZ. 1970, (1), 41, 47

DATE PUBLISHED-------70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--AVIATION GASOLINE, COLORIMETER, LIGHT ABSORPTION, PHOTOELECTRIC CELL, GASOLINE ADDITIVE, QUANTITATIVE ANALYSIS, ANILINE, OPTIC PROPERTY, PHENOL/(U)B95 130 AVIATION GASOLINE, [illegible] 130 AVIATION GASOLINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0138 STEP NO--UR/0467/70/[illegible]

CIRC ACCESSION NO--AP0129394

UNCLASSIFIED

USSR UDC 548.736

ALIYEV, Z. G., ATOVMYAN, L. O., and PONOMAREV, V. I., Branch of the Institute of Chemical Physics, Academy of Sciences USSR

"Crystalline Structure of the Monohydrate of Pyrazine-1,3-dicarbonato-carbonyltriphenylphosphine Rhodium (I)"

Moscow, Zhurnal Strukturnoy Khimii, Vol 14, No 4, Jul/Aug 73, pp 748-749

Abstract: X-ray structural analysis of the crystalline [Rh(pyrazine-2,3-dicarboxylic acid)(CO)pPh_3)] showed it to be of monoclinic syngony: a = 11.200 + 0.005, b = 27.87 + 0.01, c = 7.695 + 0.005 Å, β = 99.5 + 0.1°, d = 1.63 g/cm^3, Z = 4. The structure of a crystal consists of discrete monomeric molecules and water. The pyrazine-2,3-dicarboxylic acid forms a flat five-membered ring with the metal atom. The Ph coordination is flat, quadratic, the carbonyl group being oriented trans to the oxygen atom of the organic acid.

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2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128749

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HIGH ASH BA ALKYLPHENOLATE IS USED AS A SMOKE INHIBITOR FOR DIESEL FUEL. FACILITY: INSTITUT KHIMII PRISADOK AN AZERBAYDZHANSKOY SSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ANTISMOKE ADDITIVES FOR DIESEL FUEL -U-

AUTHOR-(05)-KULIYEV, A.M., ALIYEV, Z.E., SHAKHGELDIYEV, M.A., VARSHAVSKIY, I.L., MALOV, R.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,842

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--03MAR70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--CHEMICAL PATENT, FUEL ADDITIVE, DIESEL FUEL, BENZENE DERIVATIVE, ORGANOBARIUM COMPOUND, ANTISMOKING PROGRAM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1342 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128749

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128750

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BA SALT OF A CONDENSATION PRODUCT OF AN ALKYLPHENOL WITH HCHO IS USED AS AN ANTISMOKE ADDITIVE FOR DIESEL FUEL. FACILITY: INSTITUT KHIMII PRISADOK AN AZERBAYDZHANSKOY SSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ANTISMOKE ADDITIVES FOR DIESEL FUEL -U-

AUTHOR-(05)-KULIYEV, A.M., ALIYEV, Z.E., AGAYEVA, S.M., SHAKHGELDIYEV, M.A., VARSHAVSKIY, I.L.

COUNTRY OF INFO--USSR

A

SOURCE--U.S.S.R. 264,843

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--03MAR70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--FUEL ADDITIVE, DIESEL FUEL, CHEMICAL PATENT, PHENOL, FORMALDEHYDE, CONDENSATION REACTION, ANTISMOKING PROGRAM, ORGANOBARIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1343 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128750

UNCLASSIFIED

USSR UDC 533.9.01

ALIYEV, Yu. M., SILIN, V. P., Physics Institute imeni P. N. Lebedev, Academy of Sciences of the USSR, Moscow

"Parametric Action on a Plasma by High-Power Emission Close to Electron Cyclotron Frequencies"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 11, Nov 72, pp 2384-2391

Abstract: Taking general principles of the theory of parametric resonance in a plasma as a basis, the authors present theoretical results which show a new possibility for anomalously strong action of emission on a plasma. It is found that parametric resonance arises in a magnetically active plasma under conditions in which the overtones of the external emission frequency are close to electron cyclotron harmonics. Emission field strength threshold values are found at which the plasma begins to be parametrically unstable. The maximum values of increments in small perturbations are calculated.

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USSR

UDC 532.517.4

VEZIROV, A. M., KHASAYEV, A. M., ALIYEV, Sh. N., ALIYEV, Ye. M.

"Study of the Rheology and the Effect of Polymer Additives on the Turbulent Flow of Two-Fluid Systems"

V sb. 3-y Simpoz. po primeneniyu nen'yutonovsk. sistem v neftedobyche, Krasnodar, 1972. Tezisy dokl. (Third Symposium on the Application of Non-Newtonian Systems in Oil Drilling, Krasnodar, 1972. Subjects of Papers -- Collection of Works), Moscow, 1972, pp 48-49 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B1067)

Translation: A description and the operating principle of a laboratory setup for studying the rheological behavior of two-phase mixing and nonmixing fluid systems with polymer additives in the velocity interval shifting from 0 to 1000 sec^{-1} are presented. The effect of phase concentration and polymer additives on the magnitude of the coefficient of hydraulic resistances under a turbulent regime of the motion of water and oil with polymer additives of the polyzobutylene type in the Reynolds numbers range 5000-40,000 is investigated. Experimental data are presented on operational wells supplying oil and water. I. G. Bulina.

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2/2 022 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0144346

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOLID AND HIGH VISCOSITY LIQ. PETROLEUM RESINS WERE OBTAINED BY POLYMN. OF USING LIQ. PRODUCTS OF LOW QUALITY FROM FLUIDIZED BED THERMOCATALYTIC PYROLYSIS AND CRACKING. THE PYROLYSIS PRODUCTS YIELDED HIGHER POLYMERS, HAVING A HIGHER CONTENT OF UNSATD. HYDROCARBONS, THAN DID THOSE OF CRACKING. FACILITY: INST. NEFTEKHIM. PROTSESS., BAKU, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--PRODUCTION OF RESINS FROM LIQUID PRODUCTS FROM THE PYROLYSIS AND THERMOCATALYTIC CRACKING OF MAZUTS -U-

AUTHOR-(03)-ALIYEV, V.S., ALTMAN, N.B., TOPIN, G.A.

A

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (6), 37-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYMERIZATION, PETROLEUM PRODUCT, FLUIDIZED BED, PYROLYSIS, CATALYTIC CRACKING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/005060/C03 STEP NO--UR/0313/70/000/006/0037/0038

CIRC ACCESSION NO--AP0144346

UNCLASSIFIED

2/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111533

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CH SUB2:CHCL WAS PREPD. IN MAX. 85.5PERCENT YIELD BASED ON C SUB2 H SUB4 (80.6PERCENT ON CL) WHEN CHLORINATION OF C SUB2 H SUB4 WAS CARRIED OUT AT 450DEGREES WITH A 4:1 C SUB2 H SUB4-CL RATIO IN A JACKETED 146-6 MM STAINLESS STEEL TUBE CONTG. A FLUIDIZED BED OF 0.14-0.30 MM QUARTZ SAND INTO WHICH CL WAS INTRODUCED AT A HEIGHT OF 250 MM ABOVE THE C SUB2 H SUB2 INPUT. THE CONDENSATE CONTAINED, BESIDES 78.03PERCENT CH SUB2: CHCL, 0.98PERCENT ETCL, 0.75PERCENT CH SUB2:CCL SUB2, 1.88PERCENT CIS AND 0.94PERCENT TRANS-CLCL:CHCL, 016PERCENT MECHCL SUB2, 13.35PERCENT CICH SUB2 CH SUB2 CL, 0.38PERCENT MECCL SUB3, 0.45PERCENT CL SUB2 CHCH SUB2 CL, 1.70PERCENT CL SUB2 C:CHCL, 1.36PERCENT C SUB2 CL SUB4, 0.01PERCENT C SUB2 H SUB2, AND 0.01PERCENT CH SUB2:CHCH:CH SUB2.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--PREPARATION OF VINYL CHLORIDE BY THE DIRECT CHLORINATION OF ETHYLENE IN A FLUIDIZED CONTACT BED ON A PILOT PLANT APPARATUS -U-

AUTHOR-(05)-ALIYEV, V.S., NAMEDOV, M.A., GUSEYNOV, M.M., POPOVA, T.P., AGAYEV, M.T.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3) 616-20

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--VINYL CHLORIDE, ETHYLENE, FLUIDIZED BED, CHEMICAL PRODUCT PRODUCTION, CHLORINATED ORGANIC COMPOUND, CHLORINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0339 STEP NO--UR/0080/70/043/003/0616/0620

CIRC ACCESSION NO--AP0111533

UNCLASSIFIED

Acc. Nr: AA0039649 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code: UK0000

80097m **Diolefin hydrocarbons.** Aliev, V. S.; Kasimova, A. P.; Ter-Sarkisov, V. G. (Mamedaliev, Yu. G., Institute of Petrochemical Processes, Academy of Sciences, Azerbaidzhan S.S.R.) **Brit. 1,178,475** (Cl. C 07c), 21 Jan 1970, Appl. 03 Mar 1967; 3 pp. Diolefins were prepd. by catalytic dehydrogenation, of olefins under adiabatic conditions in the presence of steam, O, and a catalyst composed of Fe_2O_3 20-30, Cr_2O_3 43-53, ZnO 20-5, and K_2O 1-2%. Thus, a catalyst composed of Fe_2O_3 24, Cr_2O_3 50, ZnO 25, and K_2O 1% was charged into a reactor, and an 81.5-2.5% butylene-contg. starting material fed in at 585-600° at 500 l./hr at 10:1 steam-butene molar ratio, or at 800 l./hr at 20:1 ratio. When the catalyst layer was 0.5 m deep and the steam butene ratio was 20:1, the O (0.5-1:1 molar ratio O-butene) was fed above the catalyst. When the catalyst was 1.0 m deep and the steam-butene ratio was 10:1, the O was fed above the catalyst and into the catalyst layer at 2 points. This process gave 36-40% butadiene (I) based on cycled butenes, and 82 5% I based on consumed butenes. Isoprene was similarly prepd. from isoamylenes. BFPN

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REEL/FRAME
19740917

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Mining, Petroleum, Geological

USSR UDC 532.517.4

ALIYEV, Ye. M., KHASAYEV, A. M.

"Controlling the Parameters of Multiphase Turbulent Flow of a Polymer Additive"

V sb. 3-y Simpoz. po primeneniyu nen'yutonovsk. sistem v neftedobyche, Krasnodar, 1972. Tezisy dokl. (Third Symposium on the Application of Non-Newtonian Systems in Oil Drilling, Krasnodar, 1972. Subjects of Papers -- Collection of Works), Moscow, 1972, pp 47-48 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B1066)

Translation: Experimental studies of turbulent gas-liquid and multiphase flows in tubes with additives of high molecular compounds at large Reynolds numbers (up to $4.2 \cdot 10^5$) are described. The functional dependence of the structure of the gas-liquid flow on the concentration of polymer additives in the mixture is noted. An increase in the gas saturation of the flow with an increase in the concentration of polymer additives in the range of Froude criteria 0.1-0.6 is noted. Experimental-industrial tests of the application of polymer additives in operational wells are analyzed. I. G. Bulina.

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USSR UDC: 621.372.5./6

ALIYEV, V. I.

"Null Circuits With Distributed RC-Parameters"

V sb. Vopr. elektrosvyazi (Problems of Electrical Communications--collection of works), Kiev, "Tekhnika", 1970, pp 26-31 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11A133)

Translation: A detailed analysis is given of the first circuit consisting of a resistance-capacitance line and a two-terminal network of arbitrary structure. Such a circuit includes as special cases certain null circuits with distributed parameters (for instance a circuit which contains a three layered RC line and lumped resistances and capacitances), which have been taken up by other authors. An investigation is made of the transmission factor of the circuit, in particular the dependence of the null frequency on the nature of the two-terminal network. A method is given for calculating the circuit. Four illustrations, bibliography of four titles. N. S.

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USSR

ALIYEVA, M. Kh., et al, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1528-1531

is proved that the band of maximum luminescence energy is the result of emission hole-capture by the r-centers in the GaTe. The authors thank G. B. Abdullayev for his interest in the work and M. K. Sheynkman for his discussion of the results.

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USSR UDC: 621.315.592

ALIYEVA, M. Kh., ALIYEV, T. I., and KROLEVETS, N. M., Institute of Physics, Baku

"Emission Hole-Trapping by Sensitivity Centers in High-Resistance GaTe:Ge"

Leningrad, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1528-1531

Abstract: This paper represents an advance beyond the information acquired in an earlier article (T. I. Aliyev, et al, DAN AzSSR, 28, 1972, p 21) in which the authors reported on recombination transitions in high-resistance p-GaTe monocrystals alloyed with Ge and determined the parameters of sensitized recombination r-centers. The purpose of the present paper is to find out whether electrons and holes are captured by r-centers in GaTe, and to clarify the mechanism of hole capture by the r-centers. To make this latter clarification, the authors studied the steady-state photocurrents and luminescence intensity as functions of the temperature and excitation intensity at various temperatures. Curves are plotted for the photoluminescence spectra of GaTe at 138 and 300° K. It

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USSR

ALIYEVA, M. Kh., et al, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1528-1531

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USSR UDC: 621.315.592

ALIYEVA, M. Kh., ALIYEV, T. I., and KROLEVETS, N. M., Institute of Physics, Baku

"Emission Hole-Trapping by Sensitivity Centers in High-Resistance GaTe:Ge"

Leningrad, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1528-1531

Abstract: This paper represents an advance beyond the information acquired in an earlier article (T. I. Aliyev, et al, DAN AzSSR, 28, 1972, p 21) in which the authors reported on recombination transitions in high-resistance p-GaTe monocrystals alloyed with Ge and determined the parameters of sensitized recombination r-centers. The purpose of the present paper is to find out whether electrons and holes are captured by r-centers in GaTe, and to clarify the mechanism of hole capture by the r-centers. To make this latter clarification, the authors studied the steady-state photocurrents and luminescence intensity as functions of the temperature and excitation intensity at various temperatures. Curves are plotted for the photoluminescence spectra of GaTe at 138 and 300° K. It

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USSR UDC 658.5-62.503.55

ALIYEV, T. M., Dr Technical Sciences, Engineers KAPLAN, G. A., KORSH, B. S., and SEYDEL', L. R.

"One Approach to Optimization of Continuous Production Processes"

Moscow, Pribory i Sistemy Upravleniya, No 10, 1971, pp 5-6

Abstract: An attempt is made to formulate and solve a problem of stochastic programming associated with the random character of applying the solution abstracted from the random character of the coefficients of the problem. This approach permits the researcher to: (1) find solutions in the application of which the given system of limitations is satisfied with slight errors; and (2) evaluate, from the viewpoint of satisfying the assigned limitations, the degree of influence exerted by measurement accuracy on the specific function, which procedure, in turn, makes it possible to formulate feasible requirements for accuracy of the measuring instruments. This article is concerned with solving the first problem. The authors give the requirements and solve the problem mathematically.

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USSR

ALIYEV, T. A., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 458-461

as a function of frequency in explicit form using the presented dispersion law on a double logarithmic scale it is possible to determine the exponent of the frequency dependence of the absorption as was done earlier [Z. A. Benidenko, FTP, No 4, 2106, 1970]. In the two-band approximation the presented result agrees with the previous result in the case of polar optical scattering and it differs for acoustic scattering. The general conclusion regarding the increase in the exponent r in the function $\alpha \sim \lambda^r$ where λ is the wavelength of the light remains valid for all the investigated scattering mechanisms. With proper consideration of the nonparabolic nature of the band in the matrix element of scattering of the electrons on acoustic phonons the exponent r increases but remains less than two, which does not agree with E. Haga [E. Haga, et al., J. Phys. Soc. Japan, No 18, 777, 1963]. The presented matrix elements must also be used for calculating the various kinetic coefficients [T. A. Aliyev, et al., Izv. AN AzSSR, ser. fiz.-tekh. i mat. nauk, No 4, 98, 1970].

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USSR

UDC 621.315.592

ALIYEV, T. A., GASHIMZADE, F. M.

"Theory of Light Absorption by Free Carriers in Semiconductors with a Nonparabolic Band"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 458-461

Abstract: The coefficient of light absorption by free carriers in degenerate semiconductors with the Cane dispersion law was calculated considering the electron scattering on acoustic phonons, the polar optical lattice vibrations and the admixture ions. The matrix elements of the electron-phonon and electron-admixture scatterings were calculated in Bloch functions representing the solution of the Cane spectrum. No assumptions were made regarding the magnitude of the ratio Δ/ε_g where Δ is the spin-orbital splitting of the valence bands, and ε_g is the width of the forbidden zone of the semiconductor. The effect of the nonparabolic nature on the frequency dependence of the absorption coefficient was analyzed qualitatively for different mechanisms of the electron scattering. There is a sharper decrease in the absorption coefficient with frequency for all three scattering mechanisms than in the case of the parabolic band. By constructing the graph of the absorption coefficient

USSR 681.142.4:389.0

ALIYEV, T. A., Izmeritel'naya tekhnika, No 8, 1972, pp 32-34

and logic operations, there is no need for data storage.

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USSR

UDC: 681.142.4:389.0

ALIYEV, T. A.

"Digital Device for Statistical Processing of Measurement Data in the Form of Voltages"

Moscow, Izmeritel'naya Tekhnika, No 8, 1972, pp 32-34

Abstract: This article is a continuation of an earlier paper published in the journal named above by the same author (No 3, 1970), in which algorithms were proposed for the statistical processing of data given in graphic form, and a digital device based on those algorithms was described. In the present article, since it is usually more convenient to process data directly in the form of voltages to avoid the recording stage and its attendant difficulties, a second digital device is offered for statistical processing of data given in the form of voltages. This second device is based on the same algorithms as the first. It transforms the data voltages into a digital code, determines the mathematical expectation, the dispersion, the distribution law, the regression curve, and the sum of paired products. A schematic of the device is given, together with an explanation of its theory of operation. Since the data measurement and transformation are combined with the required arithmetic

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2/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123570

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COEFF. OF THE SOUND ABSORPTION AND THE SOUND VELOCITY WERE MEASURED IN THE C SUB6 H SUB14 PLUS P-NO SUB2 SYSTEM WITH THE VIEW TO CHECK THE SUPPOSED CORRELATION BETWEEN THE ACOUSTIC PROPERTIES AND THE CONCN. FLUCTUATIONS IN BINARY SYSTEMS. THE SOUND ABSORPTION WAS MEASURED BY THE PULSE METHOD AT 20-1000 MHZ AND THE VELOCITY BY THE KHABIBULLAEV-KHALIULIM METHOD (1957). THE EXPRESSION ALPHA PER FUNCTION, WHERE FUNCTION IS THE SOUND FREQUENCY, INCREASES RAPIDLY WITH THE DECREASE OF THE MOLE FRACTION OF THE HEXANE AND PASSES THROUGH A MAX. AT THE CRIT. MIXING POINT (0.599 MOLE FRACTION HEXANE AT 29.98DEGREES). THIS REGION OF RELAXATION WAS FOUND AT LOW FREQUENCIES (SMALLER THAN 10 MHZ) AND THEREFORE CAN BE DUE ONLY TO THE FLUCTUATIONS OF THE CONCN. BECAUSE, ACCORDING TO SHAKHPARONOV, THE VIBRATIONAL ROTATIONAL RELAXATION CAN OCCUR ONLY A FUNCTION GREATER THAN 10 PRIME9.

FACILITY: MOSK. GOS. UNIV., MOSCOW, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ACOUSTIC RELAXATION IN NITROBENZENE,HEXANE SOLUTIONS HAVING A CRITICAL SOLUTION POINT -U-

AUTHOR-(02)-KHABIBULLAYEV, P.K., ALIYEV, S.S.

COUNTRY OF INFO--USSR

SOURCE--AKUST. ZH. 1970, 16(1), 137-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NITROBENZENE, HEXANE, CRITICAL POINT, SOUND ABSORPTION, ACOUSTIC SPEED, VIBRATION RELAXATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1773 STEP NO--UR/0096/70/016/001/0137/0138

CIRC ACCESSION NO--AP0123570

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106914

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACOUSTICAL PROPERTIES WERE STUDIED OVER A WIDE RANGE OF FREQUENCIES, CONCNS. AND TEMPS. TO DET. THE KINETICS OF THE CONCN. FLUCTUATIONS. THE COEFF. OF SOUND ABSORPTION ALPHA WAS DETD. AT 20-1000 MHZ AND THE PROPAGATION RATE OF SOUND WAS DETD. BY A PHASE METHOD. THE ACOUSTICAL RELAXATION IN AMYL ALC. IS DUE TO STRUCTURAL RELAXATION, I.E., PROCESSES FOR THE REARRANGEMENT OF THE ASSOCD. COMPLEXES BECAUSE OF H BONDS. THE EXPTL. VALUE FOR THE RELAXATION TIME FOR AMYL ALC. IS SIMILAR TO 7.44 TIMES 10 PRIME NEGATIVE11 SEC. THE VOL. AND SHEAR VISCOSITY RELAX SIMULTANEOUSLY IN AMYL ALC. IN THE AMYL ACL. MENO SUB2 SOLNS. FOR FREQUENCY SMALLER THAN 10 PRIME9 HZ-ALPHA-F PRIME2 INCREASES SHARPLY AND PASSES THROUGH A MAX. FOR A MOLE FRACTION OF AMYL ALC. EQUAL TO THE CRIT. CONCN. THUS, A NEW REGION OF ACOUSTICAL DISPERSION EXISTS RELATED TO THE RELAXATION OF THE CONCN. FLUCTUATIONAS. THIS REGION IS CHARACTERIZED BY THE FOLLWING FEATURES: A NEW REGION OF RELAXATION, ALPHA-F PRIME2 AND AN INCREASE IN THE ATTENUATION OF THE SOUND ASSOCD. WITH IT IS OBSERVED AT LOW ULTRASONIC FREQUENCIES; THE RELAXATION TIME SPECTRUM MUST BE INTRODUCED TO DESCRIBED THE FREQUENCY DEPENDENCE OF THE ATTENUATION COEFF., THE ALPHA-F PRIME2 RELAXATION IS NOT ACCOMPANIED BY ANY SIGNIFICANT CHANGES IN THE SPEED OF SOUND.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--KINETICS OF CONCENTRATION FLUCTUATIONS IN N,AMYL ALCOHOL NITROMETHANE SOLUTIONS WITH AN UPPER CRITICAL POINT OF DISSOLUTION -U-

AUTHOR-(03)-KHABIBULLAYEV, P.K., ALIYEV, S.S., PARPIYEV, K.

COUNTRY OF INFO--USSR

SOURCE--VESTN. MOSK. UNIV., KHIJ. 1970, 11(1), 121-2

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--ACOUSTIC PROPERTY, NITROMETHANE, ALCOHOL, DISSOLUTION, ULTRASONIC FREQUENCY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0258 STEP NO--UR/0189/70/011/001/0121/0122

CIRC ACCESSION NO--AP0106914

UNCLASSIFIED

USSR UDC: [illegible]

ALTEYN, SH. M., [illegible], V. K., ESPLOY, G. D. (Deceased)

"Concerning the Calculation of an Oval Shell, Reinforced by Annular Ribs, With Account Taken of Their Discrete Disposition"

Moscow, Stroitel'naya Mekhanika i Raschet Sooruzheniy, No 1, 1977, pp 11-14

Abstract: The article deals with an infinitely long shell of oval cross-section, which is loaded by internal pressure and is reinforced by equidistant annular ribs, account being taken of their discrete disposition. The problem is solved on the basis of a method for the calculation of shells, proposed by S. N. Kan. The same designations are adopted, as those used in Kan's paper. The shell under investigation constitutes a multiply static indeterminate system. In order to evaluate the applicability of the method of "smearing" the rib rigidity, a formula for tying together the basic parameters of the container is given. An example of the calculation is given. 3 figures, 5 references.

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TsVETKOV, V. N., et al., Moscow, Doklady Akademii Nauk SSSR, Vol 109, No 5, 11 Apr 73, pp 1074 - 1077

extinguished by rotating the polarizing filters.

Both mechanical and optical measurements indicate that reliable values of lag can be determined only when the rotational speed is relatively low, before vortex effects become significant. With this restriction, the simultaneous measurement of torque moment and phase lag provides a reliable method of determining diamagnetic anisotropy.

USSR

TsVETKOV, V. N. Corresponding Member of the Academy of Sciences of the USSR, KOLOMIYeTs, I. P., RYuMTsEV, Ye. I., and ALIYeV, S. M.

"A Rotating Magnetic Field as a Method of Determining the Diamagnetic Anisotropy of Nematic Liquid Crystals"

Moscow, Doklady Akademii Nauk SSSR, Vol 109, No 5, 11 Apr 73, pp 1074 - 1077

Abstract: A liquid crystal subjected to a rotating magnetic field which is sufficiently strong and not rotating too rapidly experiences mechanical forces due to the rotation of the axis of nematic order in step with the magnetic field but lagging at some angle. Under ideal conditions it would be possible to determine the diamagnetic anisotropy by knowing the moment of mechanical rotation and the lag angle for a single value of magnetic field rotational speed. Attempts have been made to do this with a torsion balance, based on the fact that the mechanical moment reaches its maximum when the lag angle is equal to $\frac{\pi}{4}$. This procedure is subject to errors because the macroscopic uniformity of the substance breaks down before the lag angle reaches this value. The authors have supplemented the procedure by observing the liquid crystal with polarized light. At extremely slow rotations the polarization is established so that the crystal is dark. As the lag angle increases, the light is permitted to pass; it is

USSR UDC 532.517.4

VEZIROV, A. M., KHASAYEV, A. M., ALIYEV, Sh. K., ALIYEV, Ye. M.

"Study of the Rheology and the Effect of Polymer Additives on the Turbulent Flow of Two-Fluid Systems"

V sb. 3-y Simpoz. po primeneniyu nen'yutonovsk. sistem v neftedobyche, Krasnodar, 1972. Tezisy dokl. (Third Symposium on the Application of Non-Newtonian Systems in Oil Drilling, Krasnodar, 1972. Subjects of Papers -- Collection of Works), Moscow, 1972, pp 48-49 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B1067)

Translation: A description and the operating principle of a laboratory setup for studying the rheological behavior of two-phase mixing and nonmixing fluid systems with polymer additives in the velocity interval shifting from 0 to 1000 sec^{-1} are presented. The effect of phase concentration and polymer additives on the magnitude of the coefficient of hydraulic resistances under a turbulent regime of the motion of water and oil with polymer additives of the polyisobutylene type in the Reynolds numbers range 5000-40,000 is investigated. Experimental data are presented on operational wells supplying oil and water. I. G. Bulina.

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2/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ELEC. COND., THERMAL EMF. (ALPHA SUB0), MAGNETOTHERMAL EMF. (DELTA ALPHA INFINITY), AND THE HALL COEFF. WERE MEASURED IN TE DOPED IN SUB0.5 GA SUB0.5 SB (CONCN. OF CARRIERS, N EQUALS 3 TIMES 10 PRIME17-6 TIMES 10 PRIME18-CM PRIME3), 300DEGREESK. THE STRUCTURE OF THE CONDUCTION BAND (IS SMALLET THAN OR EQUAL TO N EQUALS 6 TIMES 10 PRIME18-CM PRIME3) AGREES WITH THE PREDICTION OF THE KANE THEORY (1957). BECAUSE THE EXPTL. POINTS ALPHA SUB0(N) AND DELTA ALPHA INFINITY (N) LIE WITH GOOD ACCURACY ON THE THEORETICAL CURVES CALCD. FOR THE SCATTERING OF ELECTRONS ON OPTICAL PHONONS, IT CAN BE CONCLUDED THAT THIS MECHANISM PREDOMINATES IN IN SUB0.5 GA SUB0.5 SB SOLID SOLN. CRYSTALS (AT 300DEGREESK AND 3 TIMES 10 PRIME17 IS SMALLER THAN N IS SMALLER THAN 6 TIMES 10 PRIME18-CM PRIME3).

FACILITY: INST. FIZ., BAKU, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--STRUCTURE OF THE CONDUCTION BAND AND MECHANISM OF ELECTRON SCATTERING IN IN SUB0.5 GA SUB0.5 SB -U-

AUTHOR-(03)-ZEINALOV, S.A., ALIYEV, S.A., ALIYEV, M.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 389-91

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SUBJECT AREAS--PHYSICS

TOPIC TAGS--SEMICONDUCTOR BAND STRUCTURE, THERMAL EMF, SEMICONDUCTOR CONDUCTIVITY, HALL CONSTANT, ELECTRON PHONON INTERACTION, ANTIMONIDE, GALLIUM COMPOUND, INDIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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CIRC ACCESSION NO--AP0105070

UNCLASSIFIED

2/2 036 UNCLASSIFIED PROCESSING DATE--

CIRC ACCESSION NO--AP0105179

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTIVE MASS OF
CARRIERS IN SINGLE CRYSTAL SPECIMENS OF N TYPE
EQUALS 1.2 TIMES 10 PRIME18-CM PRIME3 WAS DETD.
DISTRIBUTION OF THE REFLECTION IN THE IR REGION,
THERMOEMF, AND THE HALL EFFECT IN A STRONG MAGNETIC
REFLECTION SPECTRA EXHIBITED A MIN. WHICH IS
SEMICONDUCTORS. THE EFFECTIVE MASSES OBTAINED
MEASUREMENTS SHOW GOOD AGREEMENT. FACILITY:
USSR.

UNCLASSIFIED

1/2 036 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECTIVE MASS OF CURRENT CARRIERS IN N-AG SUB2 TE -U-

AUTHOR-(03)-KERIMOVA, T.G., ALIYEV, S.A., AKHUNDOV, G.A.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 400-1

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SUBJECT AREAS--PHYSICS

TOPIC TAGS--SILVER COMPOUND, TELLURIDE, CARRIER DENSITY, [illegible] RELEVANCE, SINGLE CRYSTAL PROPERTY, THERMAL EMF, HALL EFFECT, [illegible] MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0093 STEP NO--UR/[illegible]

CIRC ACCESSION NO--AP0105179

UNCLASSIFIED

USSR UDC 547.241 + 547.73

KHAYRULLIN, V. K., ALIYEV, R. Z., Institute of the Organic and Physical Chemistry imeni A. Ye. Arbusov, Academy of Sciences USSR

"Alkylation of 2-Thienyldichlorophosphine"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 1921-1925

Abstract: The alkylation of 2-thienyldichlorophosphine with tetraethyl lead was studied and a method was proposed for purification of ethyl-2-thienyl-chlorophosphine (I). Reactions of (I) with diethylamine and alcohols were investigated as well as of the ethyl-2-thienylphosphinous acid esters with methyl iodide, chloral, and p-quinone. The structures of these reaction products have been confirmed by IR spectral analyses.

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USSR UDC 542.91:547.1'118:547.38

ALIYEV, R. Z., and KHAYRULLIN, V. K., Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Kazan' Branch of the Academy of Sciences USSR

"Reaction of Thienyldichlorophosphine With α,β-Unsaturated Ketones"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 12, Dec 73, pp 2785-2786

Asstract: Methylisopropenyl ketone and methylvinyl ketone react with thienyldichlorophosphine in presence of acetic anhydride to form 4,5-dimethyl-2-thienyl-2-oxo-1,2-oxaphospholene-4 (I) and 5-methyl-2-thienyl-2-oxo-1,2-oxaphospholene-4 (II) respectively. Reaction of (I) and (II) with alcohols leads to the formation of thienyl-β-acetylalkylphosphinic acid esters.

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USSR UDC 547.241 + 547.73

KHAYRULLIN, V. K., and ALIYEV, R. Z., Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR

"Reaction of Ethyl-2-thienylchlorophosphine With α, β-Unsaturated Acids and Their Amides"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 10, Oct 73, pp 2165-2169

Abstract: Ethyl-2-thienylchlorophosphine reacted with acrylic, metacrylic and cinnamic acids followed by decomposition of the product formed with methanol gave ethyl-2-thienyl(β-carbomethoxyalkyl)phosphine oxides. In addition ethyl-2-thienyl(β-carboxyalkyl)phosphine oxides have been identified as byproducts. Ethyl-2-thienylchlorophosphine (I) reacts exothermally with acrylic and metacrylic acid amides yielding ethyl-2-thienyl(β-cyanoethyl)phosphine oxide (II) and ethyl-2-thienyl(β-cyanopropyl)phosphine oxide. When (I) was reacted with acrylic acid diethyl amide in presence of acetic acid, the main product was ethyl-2-thienyl(β-diethylcarbamoylethyl)phosphine oxide. (II) heated with phosphorus pentasulfide gave ethyl-2-thienyl-(β-cyanoethyl)phosphine sulfide. Diethylamide of ethyl-2-thienylphosphinous acid heated with benzaldehyde gives ethyl-2-thienyl(diethylaminobenzyl)phosphine oxide.

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USSR

KHAZHAKYAN, L. V., et al., Armyanskiy Khimicheskiy Zhurnal, Vol 25, No 6, 1972, pp 476-481

K. Even if an alkoxy radical was present in the p-position of the phenyl in IV, the value of K decreased instead of increasing as in the case of I-III. This was due to steric hindrance. The values of K were higher for compounds I-II, in which the electron density was displaced from the alkoxy group to the CO group over a conjugated system, than for compounds III, in which displacement occurred because of an inductive effect. Beginning with the Am group, steric hinderance in I-III interfered with the formation of phenol association products. As a result of the decreased tendency to form association products, both K and the physiological activity decreased. The preparation of the compounds used in the study and their properties are described by Gevorkyan et al in Arm. Khim. Zh., 24, 32, 1971; 24, 333, 1971. Determinations of the physiological activity were carried out at the Laboratory of Analgesics and Hypnotics under the direction of S. N. Asratyan.

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Pharmacology and Toxicology

USSR UDC 541.69+547.572+547.636.4

KHAZHAKYAN, L. V., LUK'YANENKO, N. L., ALIYEV, R. K., and GEVORKYAN, G. A., Institute of Fine Organic Chemistry imeni A. L. Mndzhoyan, Academy of Sciences Armenian SSR, Yerevan

"The Constants of Association of Some Aminoketones with Phenol and the Physiological Activity of These Compounds"

Yerevan, Armyanskiy Khimicheskiy Zhurnal, Vol 25, No 6, 1972, pp 476-481

Abstract: By using IR spectroscopy, the constants K of association of the physiologically active aminoketones p-RCC_6H_4-C(O)-CH(Ph)-$CH_2N(CH_2)_5$ (I), p-ROC_6H_4-C(O)-CH(Ph)-$CHN(CH_2)_4$ (II), and Ph-C(O)-$CH(C_6H_4CR$-p)-$CH_2(CH_2)_4$ (III) with phenol were determined. For compounds I-III, both the value of K and the analegesic activity increased with an increasing size of R from Me to Bu and then decreased at R = Am . In compounds IV derived from Ph-C(O)-CCH_2-$-CH_2R$, where R is $N(CH_2)_4$ or $N(CH_2)_5$, that contained two aloxy groups in the 2 and 6 or 2 and 4 positions of the phenyl ring, increasing of the size of the alkoxy groups in the o-position to the ester group reduced the value of

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